

51 correspond to original claims 18 through 31 except that claims 38 through 51 make it clear that the pyruvate carboxylase gene is an isolated gene. Antecedent basis in the present application for adding to the claims a statement that the pyruvate carboxylase is isolated may be found in the specification on page 6, line 25 to page 7, line 11 and on page 12, lines 5 and 20. Thus claims 1 through 17 and 32 through 51 are now in the case and are presented for examination.

The Examiner has given Applicants a restriction requirement arguing that there is no "unity of invention" among the claims and that the claims should be divided up among three applications. Claims 1 through 17 (Group I) directed to microbial production of an amino acid of the aspartate family using the expressed pyruvate carboxylase gene or a modification thereof to produce pyruvate carboxylase to catalyze the production of a necessary starting material for the amino acid synthesis; claims 18 through 31 are directed to the pyruvate carboxylase gene, allele variations thereof and transformed microorganisms containing the gene; and claims 32 through 37 (Group III) are directed to the use of the pyruvate carboxylase gene for increasing the production of the amino acid of the glutamate/aspartate family once again to produce pyruvate carboxylase to catalyze the production of a necessary starting material for the amino acid synthesis.

The Examiner argues that there is no "single general inventive concept" among all of the claims as required by the PCT to establish unity of invention. The Examiner also argues that it

was known in the art at the time of the present invention to isolate the pyruvate carboxylase gene to facilitate overexpression of pyruvate carboxylase.

Applicants do not agree with the restriction requirement. Applicants do not agree that it was known in the art at the time of the present invention to isolate the pyruvate carboxylase gene and to use the isolated pyruvate carboxylase gene or an allele variation thereof to facilitate overproduction of pyruvate carboxylase. The Peters-Wendisch et al reference of 1998 cited in the International Search Report and relied upon by the Examiner to show that it was known in the art at the time of the present invention to isolate the pyruvate carboxylase gene is actually the work of the present inventors. The presently named inventors were the first to isolate the pyruvate carboxylase gene and the first to use the isolated gene to overproduce pyruvate carboxylase. Note that Petra Peters-Wendisch is also one of the inventors named in the present application. Furthermore the present application is entitled to the benefit of a German priority date of 4 October 1997 and to the benefit of a second German priority date of 14 July 1998. The first German priority date is certainly before the publication date of the Peters-Wendisch et al reference of 1998 and the second German priority date may also be before the publication date of the Peters-Wendisch et al reference of 1998. Applicants are attempting to determine the publication of the second Peters-Wendisch et al reference. It was not known in the art at the time that the present invention was made to isolate the pyru-

vate carboxylase gene and to use the isolated gene to overproduce pyruvate carboxylase to catalyze the amino acid production.

There should be no restriction requirement between the claims of Group I and the claims of Group III which are really directed to the same invention. That is a method of microbial production of amino acids of the aspartate/glutamate family with increased pyruvate carboxylase gene expression is substantially the same as the use of the pyruvate carboxylase gene for increasing production of amino acids of the aspartate/glutamate family.

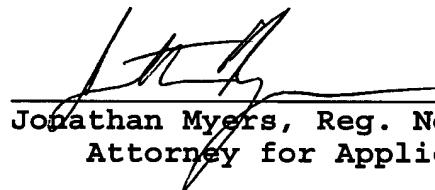
Applicants also point out that the subject matter of the claims of Group II is closest to the claimed subject matter of U.S. Patent 6,171,833, a copy of which is hereby made of record. Applicants believe that an interference should be declared between the present application and U.S. Patent 6,171,833 to let the Board of Appeals and Interferences determine who was first to conceive of the invention and to diligently reduce the invention to practice. Applicants have elected to prosecute the claims of Group II and believe that the U.S. Patent and Trademark Office should establish an interference between the claims of Group II in the present application and U.S. Patent 6,171,833. Applicants have submitted new claims 38 through 51 to cover the subject matter of Group II. These new claims specify that the pyruvate carboxylase gene is isolated as is specified in the claims of U.S. Patent 6,171,833 which refer to "an isolated nucleic acid molecule." Note also that the expression "isolated nucleic acid molecule" in the claims of U.S. Patent 6,173,833 is defined to cover not only the isolated

gene per se but also recombinant forms of the gene as well. See col. 4, lines 8 through 20 of the patent. Thus the genetically modified gene sequences within the scope of the present invention also would be part of any interference with U.S. Patent 6,173,833.

Applicants propose that their present claims 38 and 39 serve as counts for such an interference.

Further action is awaited.

Respectfully submitted,  
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Enclosure: Copy of U.S. 6,171,833